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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,544

03/29/2004

Thomas E. Stirling

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MORRISS O'BRYANT COMPAGNI, P.C.
136 SOUTH MAIN STREET
SUITE 700
SALT LAKE CITY, UT 84101

EXAMINER

BERTHEAUD, PETER JOHN

ART UNIT

PAPER NUMBER

3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/811,544

Applicant(s)

STIRLING ET AL.

Examiner

Peter J. Bertheaud

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Back 3,771,915.

Back discloses a submersible pump P having a vertical disconnection system for drop in and lift out of the pump from a sump pit, well or tank, comprising; a submersible pump P having a central axis, a pump inlet and a pump discharge outlet 14, said discharge outlet having an angled face 69 surrounding a discharge opening (see configuration in Fig. 7), the slope of said angled face being directed inwardly toward said central axis in the direction of said pump inlet (see Fig. 7). Back further discloses that the angled face is positioned on a discharge adaptor 69 which is further configured with a contact surface (the side opposite 67) for contacting a discharge outlet of said submersible pump P.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 in view of Hofstad 4,902,204.

Hawes (Fig. 4) discloses a submersible pump having a pump inlet 36 and a pump discharge outlet 20; a pump distribution plate for positioning near the floor of a sump pit or tank, said pump distribution plate 26 formed of a substantially linear plate portion of material having a top surface and a bottom surface; at least one opening 34 therethrough for receiving said pump inlet and having a bottom surface for orientation toward the floor of a sump pit or tank, and having leg members 38 extending from said bottom surface. Hawes further discloses that the pump inlet is sized for receipt in said at least one opening. Hawes fails to disclose the following claimed limitations taught by Hofstad.

Hofstad teaches a vertical submersible pump assembly comprising a pump inlet (see col. 1, lines 67-68), and a base housing 8 with a plurality of guide members extending therefrom on which the pump is mounted on. Hofstad further teaches that the guide members are arranged in relation to the pump inlet in such a way that they are capable of facilitating solids entrainment by the submersible pump (see fins on bottom of pump in Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes, by altering

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the shape of the legs below the distribution plate so as to facilitate solids entrainment by the submersible pump (Hofstad, Fig. 1 and col. 1, lines 63-68).

5. Claims 2, 3, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 in view of Hofstad 4,902,204, and in further view of Back 3,771,915.

Hawes in view of Hofstad discloses the invention as discussed above. However, Hawes in view of Hofstad fails to disclose the following claimed limitations taught by Back.

Back teaches a submersible pump comprising a pump P, a discharge outlet 14 and discharge piping 10, 12. Back further teaches that the discharge piping has an angled opening (see configuration in Fig. 7) and a disconnect system comprising an angled face 69 surrounding said pump discharge outlet for assuring mating and sealing of said pump discharge outlet to said angled opening of said discharge piping. Back also teaches a discharge elbow stand 44, 18 configured with said angled opening, and secured to the base plate 20 and said discharge piping 10,12.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes in view of Hofstad, by angling the discharge outlet and piping in order to guide the discharge outlet to sealingly engage the discharge piping (Back, col. 4, lines 47-50).

6. Claim 4, 5, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204, and in view of Back 3,771,915 and further in view of McEwen 5,030,346.

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Hawes i.v., Hofstad and in view of Back discloses the invention as discussed above as well as the distribution plate having a guide rail system connected thereto (see Hawes 14 and 40). However, Hawes i.v., Hofstad in view of Back fails to disclose the following claimed limitations taught by McEwen.

McEwen teaches a pump apparatus comprising a pump P, a discharge housing 42, and an inlet opening 68. McEwen further teaches a centering member 44 positioned within said at least one opening in said pump distribution plate 30 for receiving said pump inlet 68.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v., Hofstad in view of Back, by implementing a centering member in order to receive and mount the inlet of the pump in slip-fit relation (McEwen, col. 10, lines 25-29).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204 i.v., Back 3,771,915 and in view of McEwen 5,030,346 and in further view of Englesson 3,018,925.

Hawes i.v., Hofstad i.v., Back in view of McEwen disclose the invention as discussed above. However, Hawes i.v., Hofstad i.v., Back in view of McEwen disclose do not teach the following claimed limitations taught by Englesson.

Englesson (Fig. 5) teaches a submersible pump with an inlet 13, a discharge outlet 14, and a discharge elbow stand (see 30). Englesson further teaches a guide rail system with rail 29 a guide rail bracket 33 connected to said submersible pump 10.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v., Hofstad i.v., Back in view of McEwen disclose, by implementing a guide bracket connected to the submersible pump in order to support the pump unit when it is being raised and lowered on the rail (Engleson, col. 3, lines 17-21).

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204 i.v., Back 3,771,915 in view of Engleson 3,427,982.

Hawes i.v., Hofstad in view of Back disclose the invention as discussed above. However, Hawes i.v., Hofstad in view of Back fail to disclose the following claimed limitations taught by Engleson.

Engleson (Fig. 5) teaches a submersible pump with an inlet 14, a discharge outlet 16, and a discharge elbow stand 23. Engleson further teaches a guide rail system with rails 22, a guide rail bracket 28, connected to the discharge elbow stand 23 and positioned to guide movement of said submersible pump into and out of a well or tank.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v., Hofstad in view of Back, by connecting the guide rail system to the discharge elbow stand in order to save space by having them on a common base plate (Engleson, col. 3, lines 13-18).

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9. Claims 8, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 in view of Hofstad 4,902,204, and in further view of McEwen 5,030,346.

Hawes in view of Hofstad discloses the invention as discussed above. However, Hawes in view of Hofstad fails to disclose the following claimed limitations taught by McEwen.

McEwen teaches a pump apparatus comprising a pump P, a discharge housing 42, and an inlet opening in the bottom of 68. McEwen further teaches that the pump has a suction side, comprising a suction head plate 68 positioned on said suction side of said pump, said pump inlet being formed in said suction head plate. McEwen also teaches a centering member 44 positioned in said at least one opening in said pump distribution plate 30, said centering member being configured to receive said pump inlet of said suction head plate 68. McEwen further teaches that the centering member 44 has an angled inner surface 54, and said pump inlet of said suction head plate 68 has an outer angled surface, for guiding said pump inlet into said centering member along said angled inner surface of said centering member (see col. 12, lines 64-68)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes in view of Hofstad, by implementing an angled centering member in order to receive and mount the inlet of the pump in slip-fit relation (McEwen, col. 10, lines 25-29 and col. 12, lines 64-68).

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10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204 i.v., McEwen 5,030,346 in view of Back 3,771,915.

Hawes i.v., Hofstad in view of McEwen disclose the invention as discussed above. However, Hawes i.v., Hofstad in view of McEwen do not disclose the following claimed limitations taught by Back.

Back teaches a submersible pump comprising a pump P, a discharge outlet 14 and discharge piping 10, 12. Back further teaches that the discharge piping has an angled opening (see configuration in Fig. 7) and a disconnect system comprising an angled face 69 surrounding said pump discharge outlet for assuring mating and sealing of said pump discharge outlet to said angled opening of said discharge piping.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v., Hofstad in view of McEwen, by angling the discharge outlet and piping in order to guide the discharge outlet to sealingly engage the discharge piping (Back, col. 4, lines 47-50).

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204 i.v., McEwen 5,030,346 in view of Back 3,771,915 and in further view of Oakes 4,308,00.

Hawes i.v., Hofstad i.v., McEwen in view of Back disclose the invention as discussed above. However, Hawes i.v., Hofstad i.v., McEwen in view of Back do not disclose the following claimed limitations taught by Oakes.

Oakes teaches a submersible pump comprising a pump 5, a guide rail assembly 13, and a discharge outlet 12 connected to discharge piping 7, 8. Oakes further teaches

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that the face of said pump discharge outlet is configured to retain a discharge seal ring 44 positioned thereabout for sealing against said opening of said discharge piping 7.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v., Hofstad i.v., McEwen in view of Back, by implementing a seal ring in the angled face of the discharge outlet in order to seal the gap between the outlet and the piping (Back, col. 6, lines 41-45).

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Back 3,771,915.

Back discloses the general conditions of the claimed invention except for the express disclosure that the angles face is between about five and about forty-five degrees to the central axis. It would have been obvious to one having ordinary skill in the art at the time the invention was made to angle the face of the discharge outlet between five and forty-five degrees, since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (see MPEP 2144.05 II - Optimization of Ranges).

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Back 3,771,915 in view of Oakes 4,308,00.

Oakes teaches a submersible pump comprising a pump 5, a guide rail assembly 13, and a discharge outlet 12 connected to discharge piping 7, 8. Oakes further teaches

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that the face of said pump discharge outlet is configured to retain a discharge seal ring 44.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Back by implementing a seal ring in the angled face of the discharge outlet in order to seal the gap between the outlet and the piping (Back, col. 6, lines 41-45).

Conclusion


14. The prior art made of record, noted in the attached form 892, and not relied upon is considered pertinent to applicant's disclosure.

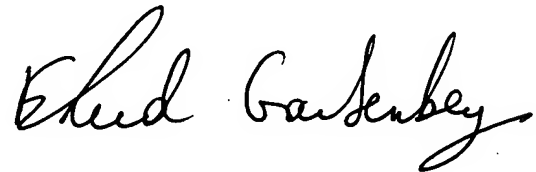
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Bertheaud whose telephone number is (571) 272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


PJB 2/15/07



EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER